

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/11861

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl' C12N15/09, C08J11/10, C08J11/18, B29B17/00, C12N1/00, C12N1/15, C12N9/30, C12N15/55//(C12N1/00, C12R1:456, C12R1:66, C12R1:685, C12R1:69), (C12N9/30, C12R1:465,

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl' C12N15/09, C08J11/10, C08J11/18, B29B17/00, C12N1/00, C12N1/15, C12N9/30, C12N15/55//(C12N1/00, C12R1:456, C12R1:66, C12R1:685, C12R1:69), (C12N9/30, C12R1:465,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

BIOSIS (DIALOG), WPI (DIALOG), JSTPlus (JOIS)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| Y         | WO 98/36086 A1 (BAYER AG.),<br>20 August, 1998 (20.08.98),<br>& DE 19706023 A1 & AU 9860993 A<br>& EP 968300 A1 & US 6255451 B1<br>& AU 734738 B & JP 2001-512504 A<br>& NZ 337239 A | 1-38, 45              |
| Y         | Tetsuya DEGUCHI, "Lignin Bunkaikin (IZU-154 Kabu) ni yoru Nylon oyobi Polyethylene no Seibunkai", Polymer Preprints, Japan, 1993, Vol.42, No.2, page 427                             | 1-38, 45              |
| Y         | JP. 52-82773 A (AGENCY OF IND.SCI. & TECHNOLOGY),<br>11 July, 1977 (11.07.77),<br>& JP 54-44749 B  | 1-38, 45              |

Further documents are listed in the continuation of Box C.

See patent family annex.

- \* Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  
15 December, 2003 (15.12.03)

Date of mailing of the international search report  
13 January, 2004 (13.01.04)

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## C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| Y         | WO 01/14524 A1 (BE ABLE KABUSHIKI KAISHA), 01 March, 2001 (01.03.01), & JP 2001-61468 A  | 1-38,45               |
| Y         | JP 10-96174 A (NAGASE SEIKAGAKU KOGYO KABUSHIKI KAISHA), 14 April, 1998 (14.04.98), (Family: none)   | 1-38,45               |
| Y         | JP 11-216355 A (STM ENG. KABUSHIKI KAISHA), 10 August, 1999 (10.08.99), (Family: none)   | 1-38,45               |
| Y         | JP 10-306098 A (BE ABLE KABUSHIKI KAISHA), 17 November, 1998 (17.11.98), (Family: none)  | 1-38,45               |
| Y         | Zangi R. et al., Molecular dynamics study of the folding of hydrophobin SC3 at a hydrophilic/hydrophobic interface., Biophys J., 2002, Vol.83, No.1, p.112-24                                    | 12-38,45              |
| Y         | Lugones LG. et al., A hydrophobin (ABH3) specifically secreted by vegetatively growing hyphae of Agaricus bisporus(common white button mushroom)., Microbiology., 1998, Vol.144, Pt.8, p.2345-53 | 12-38,45              |
| Y         | Wosten H. et al., Interfacial self-assembly of a fungal hydrophobin into a hydrophobic rodlet layer., Plant Cell., 1993, Vol.5, No.11, pages 1567 to 1574  | 12-38,45              |
| Y         | Stringer MA. et al., dewA encodes a fungal hydrophobin component of the Aspergillus spore wall., Mol.Microbiol., 1995, Vol.16, No.1, pages 33 to 44  | 12-38,45              |
| Y         | Parta M. et al., HYPI, a hydrophobin gene from Aspergillus fumigatus, complements the rodletless phenotype in Aspergillus nidulans., Infect.Immun., 1994, Vol.62, No.10, p.4389-95               | 12-38,45              |

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